

To: McGrath, Shaun[McGrath.Shaun@epa.gov]; Card, Joan[Card.Joan@epa.gov]
Cc: Smith, Paula[Smith.Paula@epa.gov]
From: Russo, Rebecca
Sent: Sat 8/8/2015 12:27:45 AM
Subject: FW: Summary of the evaluation of pH data
PHstatement8-7.docx

This went out a bit ago. Realized I haven't been cc'ing you on what I send out. Will forward and cc.

Rebecca A. Russo

Region 8 Congressional and Intergovernmental Liaison

Office: 303-312-6757

Cell: 303-204-1930

From: Russo, Rebecca
Sent: Friday, August 07, 2015 5:20 PM
To: 'john_whitney@bennet.senate.gov'; 'rosemary_rodriguez@bennet.senate.gov';
'sebastian_dawiskiba@bennet.senate.gov'; 'chuck_poplstein@gardner.senate.gov';
'betsy_bair@gardner.senate.gov'; 'Marcus, Darlene'; 'Aaron'; 'Swager, Curtis (Gardner)';
'jennifer_loraine@gardner.senate.gov'; 'chris_hansen@gardner.senate.gov';
'nicole_frazier@gardner.senate.gov'; 'tim_prowitt@bennet.senate.gov';
'laura_sherman@bennet.senate.gov'; 'tim.martin@mail.house.gov'; Gray, David; Distefano,
Nichole; Levine, Carolyn; Snyder, Raquel
Subject: Summary of the evaluation of pH data

The following is a summary of the evaluation of pH data collected as of August 6, 2015.

Additional information related to additional data, including metals, is being developed and will be provided in a separate statement.

pH (a measure of acidity) was measured at a number of locations along Cement Creek and the Animas River to Durango and beyond to Farmington, New Mexico. Except for locations within Cement Creek, generally, pH levels were measured before the arrival of the contaminant plume and found to range between 6.5 and 7.6. When the contaminated water from the mine release

passed a sampling location, the pH lowered (indicating more acid) to approximately 4.8 (below Silverton). A pH of 4.5 is consistent with the pH of a liquid like black coffee. Later, however, in locations down river, the pH began to return to pre-incident levels. Water acidity levels in the Animas above Cement Creek have been consistent over the past two days at approximately 6.4 to 6.8. For reference, the pH of saliva is roughly 6 and the pH of pure water is 7. The acidity level in Cement Creek has remained low at 3.74 since the mine release. Tomato juice and apples also have a pH of approximately 3.74. While this reference information is relevant to skin exposure, the evaluation of impacts of these pH levels on fish and other aquatic life is ongoing.

pH of Common Substances

ACIDIC						NEUTRAL	ALKALINE OR BASIC							
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Battery Acid	Stomach Acid (Hydrochloric)	Lemon Juice, Vinegar Coke and Pepsi	Grapefruit and Orange Juice Apples, Dr. Pepper Soda	Tomato Juice, Beer Acid Rain, 7-UP Soda	Black Coffee, Pepto Bismol	Healthy Skin, Hair and Nails Urine, Saliva, Milk	"Pure" Water, Blood Shampoos (7.0 to 10.0)	Baking Soda, Seawater, Eggs Perm Solutions (8.5 to 9.5)	Toothpaste, Hand Soap	Milk of Magnesia, Mild Detergent	Household Ammonia and Cleaners Soapy Water	Hair Straighteners (11.5 to 14.0)	Bleach, Oven Cleaner	Liquid Drain Cleaner, Caustic Soda

Rebecca A. Russo

Region 8 Congressional and Intergovernmental Liaison

Office: 303-312-6757

Cell: 303-204-1930

